

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

LAND SMOOTHING, (AC.)

CODE 466

DEFINITION

Removing irregularities on the land surface.

The land to be smoothed shall be cleared of vegetative matter and trash.

PURPOSE

To improve surface drainage, provide for more uniform cultivation, and improve equipment operation and efficiency.

CONSIDERATIONS

Where possible, the ground surface should be plowed or disked prior to smoothing.

Effects on the water budget, especially on volumes and rates of runoff, infiltration, and evaporation.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies on areas where depressions, mounds, old terraces, turn-rows, and other surface irregularities interfere with the application of needed soil and water conservation and management practices.

It is limited to areas having adequate soil depth or where topsoil can be salvaged and replaced.

This practice does not apply to the regular maintenance on irrigated land or on land that has been modified using practice standards Precision Land Forming (462) or Irrigation Land Leveling (464).

Effect on erosion and the movement of sediment and soluble substances attached to sediment carried by runoff.

Potential for earth moving to uncover or redistribute toxic materials, such as saline soils.

Effects on wetland hydrology and/or wetland wildlife habitat.

Potential impacts to existing utilities.

Effects on soil loss due to increased wind erosion potential and subsequent deposition.

CRITERIA

The extent of rough grading required and tolerances of the finished smoothing job shall be in keeping with the requirements of the planned cropping system.

Construction operations shall be carried out in such a manner that erosion and air and water pollution are minimized.

Irregularities shall be smoothed to the degree required for the planned use.

PLANS AND SPECIFICATIONS

Plans and specifications for land smoothing shall be in keeping with this standard and shall describe the requirement for applying the practice to achieve its intended purpose.

OPERATION AND MAINTENANCE

Actions shall be carried out to insure that this practice functions as intended. Such actions shall include performing maintenance when needed to insure that surface irregularities are maintained at the degree of smoothness required.

CONSTRUCTION SPECIFICATION
NATURAL RESOURCES CONSERVATION SERVICE
LAND SMOOTHING

1. Scope

This item shall consist of the clearing, disposal of cleared residue, and other operations necessary to remove all irregularities on the land surface by use of special equipment. Construction operations shall be carried out in such a manner that erosion, air, water, noise, and air pollution will be minimized and held within legal limits as established by state regulations.

2. Clearing and Grubbing

All trees, brush, and vegetative matter will be cleared and grubbed from the area. All combustible material cleared and grubbed from the site, shall be disposed of by burning, burying at approved locations, stacked on site if approved, or removed from the site. All burning shall conform to regulations of Alabama State laws. All non-combustible materials cleared and grubbed from these areas shall be removed from the site or buried with a minimum cover of two (2) feet. Rubber, plastic, or other non-woody materials shall not be burned.

3. Operations

The land smoothing operations shall conform to the plans as specified for this job. Irregularities to be removed shall be leveled or smoothed so as to give even uniform land slopes. Fill areas shall be provided with an allowance for settlement between 5 and 10 percent.

Where soil depth limitations require top soil surfaces, the surface layer of soil shall be removed to a depth of at least 6 inches and stockpiled on the outer perimeter of the work area and spread evenly over the designated area before starting the final smoothing operations.

The ground surface should be plowed or disked after rough grading is complete and prior to final smoothing.

When necessary, at least three passes of a land plane or leveler shall be made in different directions over the land to be smoothed, consisting of one pass along each diagonal and the last pass generally in the direction of cultivation or irrigation.

Smoothing operations will not be performed when the moisture content of the soil is so great as to result in excessive soil compaction or destruction of the soil structure. The smoothed area shall be left in such condition that, after settlement, the surface has a continuous grade toward the planned outlet and individual crop rows will contain no low places to hinder the removal of excess surface runoff.

Where other conservation measures or practices are needed to accomplish land smoothing, they will be included in the plan of improvement.

4. Vegetation

Vegetative treatment shall be applied as specified or as shown on the plans.